

# PLANNING AND RENOVATING WATER-WISE LANDSCAPES

Practical advice for citizens and developers in Durham, North Carolina

## WHAT IS WATER-WISE LANDSCAPING?

### THINKING ABOUT WATER IN OUR AREA

Water-wise landscapes are designed and maintained to create a pleasing, habitable landscape, while using less water.

Basic strategies for water-wise landscaping include knowing the water use zones in your landscape, choosing suitable plants and soils, and using efficient irrigation practices.



## WHAT ARE THE BENEFITS OF WATER-WISE LANDSCAPING?

### 1 WATER SAVINGS

Areas affected by severe and long-term droughts that use traditional landscaping and watering are often wasteful, using far more water and resources than those using water-wise practices.

Reservoir and water treatment facility capacity could be extended in times of drought if citizens used water-wise practices.

### 2 DROUGHT RESISTANCE

Water-wise landscapes would be less impacted by water use restrictions if water use is more effective and efficient.

### 3 ECOLOGICALLY SOUND LANDSCAPES

Water-wise practices create a more compatible environment and reduce pollutant run-off into streams and water supplies.

## PLAN YOUR LANDSCAPE

If you are planning from scratch or looking for ways to renovate your existing landscape, a good plan is the first step to a successful water-wise landscape.

Preservation of existing, natural areas is the most effective step to creating a water-wise landscape. Established, healthy trees and shrubs have the root systems needed to survive drought and have adapted to the existing water availability.

Identify high-use areas, water-use and sun exposure zones, and any existing plants from which your water-wise landscape could benefit. Sketch these out to help you create your design. A soil analysis will help you decide on the location of appropriate water-use zones and where any soil amendment will be needed.

Design your plan to maximize the natural conditions. Consider maintenance and water requirements in making your decisions. Don't overuse hardscapes or impervious surfaces (such as gravel, wood, or concrete) on your land. These elements create water run-off. Preserve plenty of vegetative surfaces for rain to reach the soil. Consider a rain water collection device, such as a rain barrel or a cistern, to store water for irrigation.

## DROUGHT TABOOS

During times of little rain or drought avoid the following:

- Fertilizing. It can dehydrate roots by stimulating growth and increasing water usage.
- Pruning. It encourages new growth and increases the water needs of plants.
- Applying pesticides to wilted plants.

## SELECT APPROPRIATE PLANTS

The key to the success of your water-wise landscape is plant selection. Choose plants that are adapted to the Durham area. Keep existing plants, especially drought tolerant native plants.

Check that they are planted in the correct water-use and sun exposure zone. Prepare the soil in the planting area to promote deep, healthy roots.

Lists of water-wise plants can be found in the Durham Landscape Guidelines, and on the Water-wise Web site.

## KNOW YOUR WATER USE ZONES

### VERY LOW WATER-USE ZONES

These areas do not require watering and provide the greatest potential for water conservation.

- Naturally wet areas
- Decks and paved areas

Consider using permeable materials such as bricks or paving stones

### LOW WATER-USE ZONES

These areas need little watering. Water can be conserved by using mulch, or efficient low-volume irrigation systems. Take advantage of runoff from downspouts, driveways and patios with a water collection device such as a rain barrel.

### MODERATE WATER-USE ZONES

These are areas with higher water requirements.

- Turf
- Plants with high water needs

Keep these areas small, such as focal points or entrance areas.



*Local Photos by Lindsay Darden of the Durham Planning Department*

## ADAPTIVE USE OF STORMWATER

Stormwater and surface runoff provide a ready source of water that could be used later through storage and conservation. This non-potable water could be collected using engineered tree and stormwater systems, rain gardens, or a cistern. Large or small, new or retrofit, there are creative ways to incorporate stormwater reuse into your project.

## MAINTAINING YOUR WATER-WISE LANDSCAPE

By practicing water-wise irrigation and limiting fertilization and pesticides, you can keep your water-wise landscape healthy.

Mow your turf high, leaving the clippings to replace nitrogen in the soil through decomposition.

Mulch two to four inches deep around trees and about two inches around shrubs to help plants retain soil moisture. Stir up old mulch to increase air and water flow to the soil.

While mulching around shrubs and trees can regulate soil moisture and temperature during extreme weather, improper mulch placement can injure the plant. Mounds of mulch at the bole of the plant, also known as mulch volcanoes, can smother the plant and bring unnecessary exposure to mold and disease. Mulch should be pushed back six inches from the trunk, or base, of the shrub to prevent rotting, pests and disease. Check your plants regularly for discoloration, mold or rotted bark.

Improved soil encourages water-wise plants. Good soils hold more water, provide aeration and nutrients for plants, and allow water to penetrate to deep roots.

Water your landscape with care. Monitor your irrigation practices and adjust when needed to maintain the best watering practices. Organize zones of irrigation to group plants with similar water and irrigation needs.

## FOR MORE INFORMATION

For information, call the Durham Master Gardener office at (919) 560-0528 or the Durham agricultural extension agent at (919) 560-0525.

## CREDITS AND RESOURCES:

### DURHAM MASTER GARDENER

Additional questions can be answered by calling the Durham Master Gardener office at 919-560-0528 or the Agricultural Extension agent in the Durham Location at 919-560-0525

### CREATING A WATER-WISE LANDSCAPE

Sponsored by the Virginia Cooperative Extension  
<http://www.ext.vt.edu/pubs/envirohort/426-713/426-713.html>

### HOW TO PLAN & DESIGN A WISE-WATER USE LANDSCAPE

Sponsored by the North Carolina Cooperative Extension Service  
[http://www.bae.ncsu.edu/programs/extension/publicat/wqwm/ag508\\_2.html](http://www.bae.ncsu.edu/programs/extension/publicat/wqwm/ag508_2.html)

### LANDSCAPE GUIDELINES FOR DURHAM

Durham City-County Planning Department  
[http://www.ci.durham.nc.us/departments/planning/zoning\\_committee/items/durham\\_landscape\\_guidelines.pdf](http://www.ci.durham.nc.us/departments/planning/zoning_committee/items/durham_landscape_guidelines.pdf)

### NC DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES

<http://www.ncagr.com/index.htm>  
<http://www.ncagr.com/paffairs/AgReview/articles/2008/4-08waterwise.htm>

### NC GREEN INDUSTRY COUNCIL FURTHER INFORMATION ON WATER WISE

<http://ncgreenindustrycouncil.com/>

### WATER SENSE

Sponsored by Environmental Protection Agency and Durham Department of Water Management  
<http://www.epa.gov/watersense/index.htm>  
[http://www.ci.durham.nc.us/departments/wm/water\\_update.cfm](http://www.ci.durham.nc.us/departments/wm/water_update.cfm)

### WATER USE IT WISELY

[www.wateruseitwisely.com](http://www.wateruseitwisely.com)

### XERISCAPE NORTH CAROLINA

<http://www.ncsu.edu/wrri/uwc/xeriscape.pdf>

